



VTX0053-US

PATENT

#7
07-02-03
SI

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

CHRIS GOODINGS

Serial No.: 10/035,073

Filed: December 28, 2001

For: FRAME STRUCTURE WITH
DIVERSITY

Art Unit: 2681

Examiner: Not Yet Assigned

INFORMATION DISCLOSURE STATEMENT

RECEIVED

JUN 13 2003

Technology Center 2600Commissioner for Patents
Washington, D.C. 20231

Sir:

Applicants wish to make of record in the above-identified application the document or documents referenced on the attached Form PTO-1449. A copy of each reference is enclosed herewith.

The cited references are mentioned in the Search Report (copy enclosed) of applicant's corresponding United Kingdom patent application and are believed relevant for at least that reason.

The undersigned believes that this Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits for the above-referenced application. Accordingly, Applicants do not believe that a fee is due for filing this paper. However, should a first action on the merits have been issued on the same day or before this Information Disclosure Statement is filed, please accept this Information Disclosure Statement under Rule 97(c) and

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charge the requisite Rule 17(p) fee to our Deposit Account No. 50-1390, under Order No. VTX0053-US and proceed to consider this Information Disclosure Statement.

It is respectfully requested that the information be expressly considered during the prosecution of this application, and that each reference be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This submission does not represent that any referenced document is material or constitutes "prior art." If it should be determined that one or more of the referenced documents constitute "prior art" under United States law, Applicants reserve the right to present to the Office the relevant facts and law regarding the appropriate status of the reference or references.

Applicants further reserve the right to take appropriate action to establish the patentability of the disclosed invention over any referenced document, should it be applied against the claims of the present application.


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Date: June 12, 2003

Respectfully submitted,

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Your Reference: IML/1b/kz/42706.GB02
Application No: GB 0130996.2

25 March 2003

Dear Sirs

Patents Act 1977: Search and Examination Report under Sections 17 and 18(3)

Latest date for reply:

25 September 2003

In response to the further Patents Form 9/77 filed on 4 March 2003, I enclose two copies of my report and two copies of the citations.

By the above date you should either file amendments to meet the objections in the report or make observations on them. If you do not, the application may be refused.

Yours faithfully



Gareth Griffiths
Examiner

Application No: GB 0130996.2
Claims searched: 16

Examiner: Gareth Griffiths
Date of search: 26 March 2003

Patents Act 1977 : Further Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X	16	WO00/70811 A1 (ERICSSON) whole document
X	16	WO95/34960 A1 (VLSI) whole document

Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC^V:

H4L, H4P

Worldwide search of patent documents classified in the following areas of the IPC⁷ :

HO4B, H04J, H04L

The following online and other databases have been used in the preparation of this search report :

WPI, EPODOC, JAPIO

Your ref: IML/1b/kz/42706.GB02
Application No: GB 0130996.2
Applicant: Vtech Communications Limited

Examiner: Gareth Griffiths
Tel: 01633 814937
Date of report: 25 March 2003

Latest date for reply: 25 September 2003

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Patents Act 1977

Search and Examination Report under Sections 17 & 18(3)

Plurality of invention

1. Your claims define two separate inventions not forming a single inventive concept. The inventions are:

- The invention according to claims 1, 10, 11, 13, 15 and 17
- The invention according to claim 16

2. You will need to amend your claims, so that they relate to only one invention or inventive concept. You will also need to make consequential amendments to the description. You may wish to consider filing a divisional application. Any such application should normally be filed no later than 3 months before the expiry of the period for putting the present application in order.

Novelty

3. The invention as defined in claim 16 is not new because it has already been disclosed in each of the following documents:

WO00/70811 A1 (ERICSSON)
WO95/34960 A1 (VLSI)

4. 'ERICSSON' discloses a frequency hopping system in which the same data packet is retransmitted on a different frequency. The second data packet is offset from the first by one or more frequency hops. At the receiver either of the packets can be discarded depending on whether they have errors. It is implicit that if the first has errors and the second has not then the second is stored and vice versa.

5. 'VLSI' also discloses a frequency hopping system in which the same data block is retransmitted on successive frequencies. Corrupted blocks are discarded and therefore as with 'ERICSSON' it is implicit that if the first has errors and the second has not then the second is stored and vice versa. Furthermore if first and second blocks are corrupted, they are both discarded.

[Examination Report contd.]

Inventive step

6. The invention as defined in claims 1, 2, 6 to 14 and 17 is obvious in view of what has already been disclosed in the following documents:

WO00/70811 A1 (ERICSSON)
WO95/34960 A1 (VLSI
JP6177863 A (IDOU TSUSHIN)

7. 'IDOU TSUSHIN' discloses transmission of data frames comprising data not previously transmitted and data previously transmitted. 'VLSI' and 'ERICSSON' are examples only of many documents which disclose a frequency hopped system in which successive frames are transmitted on different frequencies ('ERICSSON' is also a TDD system). Given that FH/TDD communications systems in which successive data frames occur on different frequencies is conventional it would be obvious to employ the frame structure of 'IDOU TSUSHIN' to reduce errors. Therefore claims 1, 10, 11 and 12 are obvious.

8. 'IDOU TSUSHIN' must implicitly have error detection information in order to detect errors, and placing this information in a preamble is conventional. Therefore claim 2 is obvious.

9. 'ERICSSON' discloses re-transmission only if there is interference, i.e. if the quality fails to be of a required level. Therefore claims 6, 7, 8, 9, 13 and 14 are obvious.

10. De-powering receiver circuits if repeated data has already been received without error is a well known technique (see for example the abstracts of WO95/31047, US5396660). The addition of this feature to the invention as in claim 17 is therefore obvious.